

**FORTY-SECOND MEETING**  
**NATIONAL DEAFNESS AND OTHER COMMUNICATION DISORDERS**  
**ADVISORY COUNCIL**

**May 22, 2002**

**National Institutes of Health**  
**Bethesda, Maryland**

**MINUTES**

The National Deafness and Other Communication Disorders Advisory Council convened for its forty-second meeting on May 22, 2002, in Conference Room 6, National Institutes of Health (NIH), Bethesda, MD. Dr. James F. Battey, Jr., Director, National Institute on Deafness and Other Communication Disorders (NIDCD), served as Chairperson. In accordance with Public Law 92-463, the meeting was:

Open: May 22, 2002: 8:30 a.m. to 12:00 p.m., for the review and discussion of program development, needs and policy; and

Closed: May 22, 2002: 12:00 p.m. to 3:00 p.m. for review of individual grant applications.

Council members in attendance:<sup>1</sup>

Dr. Gary K. Beauchamp  
Dr. Rita S. Berndt  
Dr. Gail D. Burd  
Dr. Richard A. Chole  
Dr. Bernard Cohen  
Dr. Judy R. Dubno  
Dr. Bernard A. Harris  
Dr. Beverly S. Emanuel

Dr. Ronald R. Hoy  
Dr. Jacqueline E. Jones  
Dr. David J. Lim  
Dr. John P. Madison  
Dr. Miriam H. Meisler  
Dr. Ingo R. Titze  
Ms. Heather Whitestone-McCallum

Council members not participating:

Dr. Nicolas Linares-Orama  
Dr. Robert E. Johnson

<sup>1</sup>For the record, it is noted that members absent themselves from the meeting when the Council is discussing applications (a) from their respective institutions or (b) in which a real or apparent conflict of interest might occur. This procedure applies only to individual discussion of an application and not to "en bloc" actions.

Ex-Officio Members absent:

Dr. Lucille B. Beck  
Dr. John R. Franks  
Dr. Michael E. Hoffer

The Council roster is found as Appendix 1.

Various members of the public, as well as NIDCD staff and other NIH staff, were in attendance during the open session of the Council meeting. A complete list of those present for all or part of the meeting is found in Appendix 2.

**I. Call To Order and Opening Remarks .....Dr. James F. Battey, Jr.**

The meeting was called to order by Dr. Battey, Director, NIDCD, who thanked Council members for their service and advice to the Institute. Dr. Nicolas Linares-Orama and Dr. Robert E. Johnson were unable to attend this meeting.

**II. Council Procedures .....Dr. Craig A. Jordan**

*Procedural Matters*

Dr. Jordan discussed important procedural matters, including requirements imposed by the Government in the Sunshine Act and the Federal Advisory Committee Act. The necessity of members avoiding conflict of interest, or the appearance thereof, was stressed, as was the need to maintain confidentiality concerning the proceedings and materials related to the closed portion of the meeting. Dr. Jordan announced that the Council meeting would be open to the public during the morning session, but would be closed for consideration of grant applications during the afternoon.

*Consideration of Minutes of the Meeting of January 26, 2002*

Dr. Battey called members' attention to the minutes of the January 26, 2002 meeting of the Advisory Council. The minutes were approved as written.

*Confirmation of Dates for Future Council Meetings*

Dates for the Council meetings through September 2004 have been established. A list of these meetings was distributed to the Council members. The next meeting of Council is scheduled for Friday, September 13, 2002 on the NIH campus, Bethesda, Maryland.

### **III. Report of the Director, NIDCD .....Dr. Battey**

#### **NIDCD Staff**

Dr. Battey introduced and welcomed Mr. Mark Rotariu, who will serve as the NIDCD Budget Officer. Mr. Rotariu will be replacing Ms. Pat Sparks, who is retiring in June. Dr. Battey extended the Institute's appreciation to Ms. Sparks for her outstanding service to the NIDCD.

#### **Update on Mouse Sequencing Project**

Dr. Battey updated the Council on the activities of the Mouse Genome Sequencing Consortium's program. The mouse genome project is a broad international collaboration, including a genome-wide sequencing program, targeted sequencing programs; cDNA sequencing programs and informatics programs. The Mouse Genome Sequencing Consortium is a collaboration of three private companies, six institutes of the National Institutes of Health and the Wellcome Trust working on a genome-wide basis to generate a finished sequence of the mouse genome, dovetailing with a number of targeted sequencing programs. The DNA sequence of the mouse genome is an essential tool to identify and study the function of human genes.

#### **Budget Considerations:**

In his discussion of the Institute's budget, Dr. Battey described how the \$61.3 million available for new and competing research project grants has been allocated for FY2002. First, \$9.9 million has been required for fiscal year programmatic requirements; \$3 million for AIDS set-aside, and \$.4 million for a carryover commitment. Twenty percent of the remaining \$50.7 million is designated for High Program Priority (HPP). When apportioned for the three Council meetings in FY 2002, \$4.3 million is available for HPP applications at the May meeting. The budget has \$15.2 million available for the initial payline, which should allow funding of all applications to the 28.0 percentile plus additional HPP applications. A copy of the slides Dr. Battey used for his budget presentation is included in these minutes as Appendix 3.

### **IV. Report of the Director, Division of Extramural Research .....Dr. Robert Dobie**

#### **DER Director's Support Team**

In an effort to keep Council informed about the responsibilities handled by various components of the Division of Extramural Research, representatives of each of the Division's branches will periodically discuss their responsibilities and activities. Dr. Dobie introduced Ms. Jeannie Combs, who discussed the functions of her team, which includes Ms. Debbie Holmes, Ms. Donna Kemmerle and Ms. Nanette Stephenson. This team was created to handle a variety of administrative functions within the Office of the Director, Division of Extramural Research. These functions include providing administrative support to Dr. Dobie; processing requests for information through the Freedom of Information Act; coordinating and processing all Committee Management activities, forms and reports; and processing reimbursement of travel, per diem, and other expenses for consultants through the Scientific Review and Evaluation

Award, otherwise known as the SREA Account. Ms. Combs and her team are also responsible for all activities surrounding the meetings of the Advisory Council and the Advisory Council website.

### Certificates of Confidentiality

Next, Dr. Dobie discussed Certificates of Confidentiality, which are issued by the National Institutes of Health (NIH) to protect the privacy of research subjects. These certificates serve to protect investigators and institutions from being compelled to release information that could be used to identify subjects within a research project. Certificates of Confidentiality are issued to institutions or universities where the research is conducted. They allow the investigator and others who have access to research records to refuse to disclose identifying information in any civil, criminal, administrative, legislative, or other proceeding, whether at the federal, state, or local level.

Identifying information is broadly defined as any item or combination of items in the research data that could lead directly or indirectly to the identification of a research subject.

By protecting researchers and institutions from being compelled to disclose information that would identify research participants, Certificates of Confidentiality help achieve the research objectives and promote participating in studies by assuring privacy to subjects. For more information, see <http://grants.nih.gov/grants/policy/coc/index.htm>.

### NIH Loan Repayment Program:

Dr. Dobie discussed NIH's Loan Repayment Program which is now in place for both Intramural and Extramural applicants. The Office of Loan Repayment (OLR), located in the Office of the Director (OD), National Institutes of Health (NIH) is responsible for the administration of payments and oversight of the application process for the following Loan Repayment Programs: Pediatric; Clinical Researchers; Minority Health Disparities Research; Clinical Researchers from Disadvantaged Backgrounds; and Contraception and Infertility Research.

The Extramural Loan Repayment Programs may repay up to a maximum of \$35,000 a year towards each participant's outstanding eligible educational loan debt depending on total eligible repayable debt. In return, participants must sign a contract agreeing to conduct qualified research activities for a minimum of 2 years. Participants may apply for additional renewal contracts and may continue to receive loan repayment benefits, subject to the approval of the NIH. Actual loan repayments are based on the proportion of a participant's qualifying educational loan debt relative to his/her salary or compensation at the time the Loan Repayment Program contract begins. Loan repayment benefits represent taxable income for participants. The program also includes payments equal to 39 percent of total loan repayments that will be credited directly to the participants' Internal Revenue Service (IRS) Federal tax accounts.

Dr. Dobie stated that nine applications to this program have been received by NIDCD and will be reviewed in June; it is expected that several will be awarded.

Individuals who wish to apply to one of these Extramural Loan Repayment Programs may apply on-line at <http://www.lrp.nih.gov>. Additional information about this program can be obtained by calling the LRP Helpline at 866-849-4047; sending an email to [LRP@NIH.GOV](mailto:LRP@NIH.GOV); or visiting the NIH Loan Repayment Website at <http://www.lrp.nih.gov/NIHLRP/about/extramural/index.htm>.

**V. NIDCD Strategic Plan .....Dr. Battey**

Dr. Battey, with Dr. Madison, Dr. Harris and Ms. Sorkin, discussed the Institute’s Plain Language Version of the NIDCD Strategic Plan. Council discussion of the plain language version of the ‘Strategic Plan” yielded extensive editing recommendations, and a decision was made to re-write the plan in its entirety. NIDCD staff will initiate this process and will incorporate the recommendations of Council, staff, and other sources, as needed. It is hoped that the re-written plan will be available by our next meeting.

**VI. Council Member Presentations ..... Dr. Richard Chole**

Starting with this meeting, time has been allotted on the agenda for one or two Council members to present a synopsis of their research, interests, and/or other efforts related to the broad interests of the communities served by NIDCD. One goal is to familiarize staff and other members of Council with each member’s research/expertise, in order to facilitate stronger interactions among Council members and staff members. Another goal is to take advantage of the cadre of accomplished individuals on Council and allow them to share their unique knowledge, abilities, and perspectives with the other members. We envision this as an ongoing process with one or two members speaking at each Council meeting.

Dr. Richard Chole presented a summary of his work on middle ear cholesteatoma. These studies have shown that the bone destruction seen in this disease is a result of the recruitment and activation of osteoclasts. Osteoclast activation and control was found to be due to a number of local inflammatory factors such as IL-1, TNF-alpha, nitric oxide and even neuropeptides. Recent studies have shown that bacterial biofilms exist in most cholesteatomas which may contribute to the chronic, unremitting nature of this disease.

Dr. Miriam Meisler described work from her lab dealing with the human gene family of voltage-gated sodium channels that are located on chromosome band 2q24 and are expressed in neurons of the CNS and PNS. Analysis of mice with mutations in sodium channel genes led to the discovery of human mutations in the genes SCN1A and SCN2A that are responsible for inherited epilepsy. Mutations of the mouse channel SCN8A change the firing patterns of cartwheel neurons in the dorsal cochlear nucleus. We are screening to detect mutations in sodium channel genes in other human disorders.

**VIII. Scientific Presentation: ..... Dr. Sheila Blumstein**

Dr. Battey introduced Dr. Sheila Blumstein, Albert D. Mead Professor of Cognitive and Linguistic Sciences at Brown University, providence, Rhode Island. Dr. Blumstein discussed her research in a presentation entitled: " From Sound to Meaning: Evidence from Normal Subjects, Aphasic Patients, and Neuroimaging.

Following is an abstract of Dr. Blumstein's presentation:

“This research explored the functional architecture of the mental lexicon and the neural basis underlying lexical processing. A series of experiments with both normal subjects and aphasic patients were discussed exploring the nature of the lexical-semantic network and the processes that map sound structure on to lexical representations. In one set of experiments, we investigated semantic priming effects in a lexical decision task with highly associated words, e.g. cat-dog, and also with ambiguous words, coin-bank-money vs. river-bank-money. In a second set of experiments, we examined the influence of phonological factors on lexical access. We explored the effects of modifications of an auditorily presented prime stimulus on the magnitude of semantic priming to a real word target in a lexical decision task. Results from normal subjects suggest that:

- activation of the lexicon is graded,
- phonological structure influences lexical activation,
- nonwords partially activate the lexicon and the extent of the activation is a function of the phonological distance of the nonword from a lexical entry.

Results from aphasic patients suggest that, in contrast to the classical lesion model, both anterior and posterior brain structures are involved in lexical processing. In particular, both Broca's aphasics (with anterior brain damage) and Wernicke's aphasics (with posterior damage) have deficits in the dynamics of lexical activation. Broca's aphasics appear to have an overall reduction in lexical activation, whereas Wernicke's aphasics appear to have an increase in lexical activation or a failure to inhibit lexical candidates.

The potential neural systems underlying lexical processing were also investigated using event-related functional neuroimaging with normal subjects. We investigated semantic priming in an auditory lexical decision task. The behavioral results showed that all subjects demonstrated semantic priming. Results of the fMRI analyses indicated that the neural correlates underlying semantic priming involve a distributed system including both anterior and posterior brain structures. Similar neural systems were activated for the related, unrelated and nonword conditions with differences emerging in the magnitude rather than the areas of activation. Less activation occurred for semantically related word pairs, e.g. trapeze-circus, than for semantically unrelated pairs, e.g. pollute-circus, in cortical areas including the left superior temporal gyrus, the left precentral gyrus, and the middle frontal gyrus bilaterally. Results suggest a functional distinction between posterior and anterior brain structures in lexical processing. Posterior structures (temporal and parietal) appear to be recruited for accessing in stored lexical representations and the lexical-semantic network, whereas anterior structures appear to be a part of a semantic executive system and recruited in tasks requiring overt semantic decisions.”

## **CLOSED SESSION**

### **IX. Council Consideration of Pending Applications**

The Council gave special attention to applications from foreign institutions and to applications involving issues related to protection of human subjects, animal welfare, biohazards and/or women/minority/children representation in study populations as identified by the initial review groups.

#### **A. Research Project Grant Awards**

1. Consideration of Applications: On the Council's agenda was a total of 118 research grant applications; 87 applications had primary assignment to NIDCD, in the amount of \$26.9 million first-year direct costs. It is anticipated that, of the applications competing at this Council, NIDCD will be able to award grants to applications scoring through the 28.0 percentile.

#### **B. Special Programs Actions**

1. Small Grants (R03): The Council recommended support for seventeen applications.
2. Academic Research Enhancement Awards (AREA) (R15). The Council recommended support for two applications.
3. Small Business Technology Transfer (STTR). The Council recommended support for one Phase I (R41) application and one Phase II (R42) application.
4. Small Business Innovation Research Awards (SBIR). The Council recommended support for two Phase I (R43) and five Phase II (R44) applications.
5. Center Core Grants (P30). The Council recommended support for three applications.
6. Clinical Research Center Grants (P50). The Council recommended support for one application.
7. Clinical Trial Planning Grants (PAR-00-007). The Council recommended support for one R21 application.
8. Genetic Testing and the Clinical Management of Nonsyndromic Hereditary Hearing Impairment (PAS01-036). The Council recommended support for four applications.
9. Autism CPEA Centers (HD01-110). The Council recommended support for one application, and partial funding for two others.

10. Autism STAART Centers (MH02-001). The Council recommended partial funding of one application.
11. Gene Therapy for Neurologic Disorders (NS02-007). The Council recommended support of two applications.

**C. Career Development Programs**

1. Mentored Clinical Scientist Development Award (K08): The Council recommended support for two applications.

**X. Adjournment:** The meeting was adjourned at 3:00 p.m. on May 22, 2002.



## **XI. Certification of Minutes**

We certify that, to the best of our knowledge, the foregoing minutes and attachments are accurate and correct.<sup>2</sup>

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Craig A. Jordan, Ph.D.  
Executive Secretary  
National Deafness and Other Communication  
Disorders Advisory Council

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James F. Battey, Jr., M.D., Ph.D.  
Chairman  
National Deafness and Other Communication  
Disorders Advisory Council

Director  
National Institute on Deafness and  
Other Communication Disorders

Jeannie Combs  
Council Assistant

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<sup>2</sup> These minutes will be formally considered by the Council at its next meeting; corrections or notations will be incorporated in the minutes of that meeting.

## **APPENDICES**

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## Roster

### National Deafness and Other Communication Disorders Advisory Council

#### Chairperson

Battey, James F., Jr., M.D., Ph.D.

Director

National Deafness and Other Communication Disorders  
Bethesda, Maryland

BEAUCHAMP, Gary K., Ph.D. Director and President Monell Chemical Senses Center Philadelphia, PA	2005	The Charles E.H.Upham Professor of Pediatrics University of Pennsylvania School of Medicine Chief, Division of Human Genetics and Molecular Biology Abramson Research Center Children's Hospital of Philadelphia Philadelphia, PA	
BERNDT, Rita S., Ph.D. Professor Department of Neurology University of Maryland School of Medicine Baltimore, Maryland	2002		
		HARRIS, Bernard A., Jr., M.D. President The Harris Foundation, Inc. Houston, Texas	2002
BURD, Gail D., Ph.D. Associate Professor Department of Molecular and Cellular Biology University of Arizona Tucson, Arizona	2003		
		HOY, Ronald R., Ph.D. Professor Section of Neurobiology and Behavior Cornell University Ithaca, New York	2003
CHOLE, Richard A., M.D., Ph.D. Lindburg Professor and Head Department of Otolaryngology Washington University School of Medicine St. Louis, Missouri	2005		
		JOHNSON, Robert E., Ph.D. Professor American Sign Language, Linguistics and Interpretation, Gallaudet University Washington, D.C.	2005
COHEN, Bernard, M.D. Morris B. Bender Professor Department of Neurology Mount Sinai School of Medicine City University of New York New York, New York	2002		
		JONES, Jacqueline E., M.D. Associate Professor of Clinical Otolaryngology Cornell University Medical College New York, New York	2002
DUBNO, Judy R., Ph.D. Professor Department of Otolaryngology- Head and Neck Surgery Medical University of South Carolina Walton Research Building Charleston, SC	2003		
		LIM, David J., M.D., Ph.D. Executive Vice President, Research Head, Dept of Cell and Molecular Biology House Ear Institute Los Angeles, California	2005
EMANUEL, Beverly S., Ph.D.	2004		

LINARES-ORAMA, Nicolas, Ph.D. 2004  
Professor of Language Pathology  
Filius Institute  
University of Puerto Rico  
San Juan, Puerto Rico

MADISON, John P., Ed.D. 2004  
Associate Professor  
Department of English  
National Technical Institute for the Deaf  
Rochester, NY

MEISLER, Miriam H., Ph.D. 2003  
Professor  
Human Genetics Department  
School of Medicine  
University of Michigan  
Ann Arbor, Michigan

SORKIN, Donna L. 2002  
Vice President, Consumer Affairs  
Cochlear Corporation  
McClean, VA

TITZE, Ingo R., Ph.D. 2004  
Distinguished Professor  
Speech Science and Voice  
Department of Speech Pathology  
and Audiology  
Director, National Center  
for Voice and Speech  
University of Iowa  
Iowa City, IA

WHITESTONE-MCCALLUM, Heather  
President  
Heather Liegh Whitestone, Inc.  
Atlanta, GA

Ex-Officio Members:

BECK, Lucille B., Ph.D.  
Director  
Audiology and Speech Pathology  
Service  
Department of Veterans Affairs  
Washington, D.C.

FRANKS, John R., Ph.D.  
Chief, Bioacoustics and Occupational  
Vibration Section  
Physical Agent Effects Branch  
Division of Biomedical and Behavioral Science  
National Institute for Occupational  
Safety and Health  
Cincinnati, Ohio

HOFFER, Michael E., M.D.  
Department of Otolaryngology  
Naval Medical Center  
San Diego, California

THOMPSON, The Honorable Tommy G.  
Secretary  
Department of Health and  
Human Services  
Hubert H. Humphrey Building  
Washington, D.C.

ZERHOUNI, Elias Adam, M.D.  
Director  
National Institutes of Health  
Bethesda, Maryland 20892

**EXECUTIVE SECRETARY**

JORDAN, Craig A., Ph.D.  
Chief, Scientific Review Branch  
Division of Extramural Research, NIDCD  
Bethesda, Maryland

*Rev. May 2002*

## **Appendix 2**

### ATTENDANCE LIST

Other than Council members, attendees at the May 2002 Council meeting included:

#### **NIDCD Staff:**

##### **Office of the Director**

Luecke, Donald H., M.D., Deputy Director

##### **Office of Health Communication and Public Liaison**

Allen, Marin, Chief

##### **Office of Administration**

Kerr, W. David, Executive Officer

##### **Financial Management Branch**

Sparks, Patience, Budget Officer

Rotariu, Mark, Budget Officer

##### **Information Systems Management Branch**

Jones, Jackie, Chief

##### **Science Policy and Planning Branch**

Wong, Baldwin, Chief

Rodas, Enna

##### **Division of Extramural Research**

Dobie, Robert A., M.D., Director

Combs, Jeannie, Program Analyst

Holmes, Debbie, Secretary

Stephenson, Nanette, Program Assistant

##### **Grants Management Branch**

Stone, Sara, Chief

Chicchirichi, David, Grants Management Specialist

Dabney, Sherry, Grants Management Officer

DaSilva, Maria, Program Assistant

Hamilton, Gail, Grants Management Specialist

McNamara, Castilla, Grants Management Specialist

Ranney, Meigs, Grants Management Officer

Scientific Programs Branch

Cooper, Judith, Ph.D., Chief; and Program Director, Language

Voice, Speech, Language, Smell and Taste Section

Davis, Barry, Ph.D., Program Director, Taste and Smell Program

Shekim, Lana, Ph.D., Program Director, Voice, Speech  
and Language

Hambrecht, Terry, M.D., Consultant

Hearing and Balance/Vestibular Section

Donahue, Amy, Chief; and Program Director, Hearing

Freeman, Nancy, Ph.D., Program Director, Hearing

Johnson, Thomas, Ph.D., Program Director, Hearing

Luethke, Lynn, Ph.D., Program Director, Hearing

Clinical Trials, Epidemiology and Biostatistics Section

Gulya, Julie, M.D., Chief, Program Director, Clinical Trials

Hoffman, Howard, Program Director for

Epidemiology & Biostatistics

Jelen, Janet, Computer Specialist

Chiu, May, Program Analyst

Scientific Review Branch

Jordan, Craig A., Ph.D., Chief

Azadegan, Ali, D.V.M., Ph.D., Scientific Review Administrator

Oaks, Stanley C., Ph.D., Scientific Review Administrator

Stick, Melissa J., Ph.D., M.P.H., Scientific Review Administrator

Center for Scientific Review, NIH

Kimm, Joseph, Ph.D., Scientific Review Administrator

Bishop, John, Ph.D., Scientific Review Administrator

Others

Moss, Sharon, Ph.D., American Speech and Hearing Association

Wetzel, Alissa, Sign Language Associates

Dencer, Brenda, Sign Language Associates

### **Appendix 3**

#### **NIDCD Director's Report Slides**

As Presented By

James F. Battey, Jr., M.D., Ph.D.  
Director, NIDCD

NIDCD Advisory Council Meeting

May 22, 2002

**National Institute on Deafness and Other Communication Disorders  
Budget Mechanism**

**(Dollars in thousands)**

	<b>FY 2003 <u>President's Budget</u></b>	<b>Percent of <u>Total</u></b>
<b>Research Projects Grants</b>	<b>\$262,712</b>	<b>70.6%</b>
<b>Research Centers</b>	<b>23,919</b>	<b>6.4%</b>
<b>Other Research</b>	<b>9,326</b>	<b>2.5%</b>
<b>Total, Res. Grants</b>	<b>295,957</b>	<b>79.5%</b>
<b>Individual Training</b>	<b>4,785</b>	
<b>Institutional Training</b>	<b>8,833</b>	
<b>Total, Training</b>	<b>13,618</b>	<b>3.7%</b>
<b>R&amp;D Contracts</b>	<b>14,019</b>	<b>3.8%</b>
<b>Intramural Research</b>	<b>32,862</b>	<b>8.8%</b>
<b>Research Mgmt. &amp; Support</b>	<b>15,495</b>	<b>4.2%</b>
<b>TOTAL</b>	<b>371,951</b>	



**National Institute on Deafness and Other Communication Disorders**

**May 2002 Council  
Competing Research Project Grants  
(Dollars in thousands)**

<b>\$ 61,260</b>	<b>FY 2002 Appropriation</b>
<b><u>-9,930</u></b>	<b>Programmatic funding requirements</b>
<b>51,330</b>	
<b><u>-237</u></b>	<b>AIDS</b>
<b>51,093</b>	
<b><u>-419</u></b>	<b>Carryover</b>
<b>50,674</b>	
<b>4,338</b>	<b>Available for HPP for each Council</b>
<b>\$15,193</b>	<b>Available for May initial payline through the 28.0 percentile</b>

**FY 2003  
President's Budget**

	<u>No.</u>	<u>Amount</u>
Noncompeting	645	\$182,368
Admin. Supp.	(35)	1,500
<u>Competing</u>	<u>262</u>	<u>69,982</u>
Subtotal, RPGs	907	253,850
SBIR/STTR	<u>35</u>	<u>8,862</u>
Total, RPGs	942	262,712

**National Institutes of Health  
National Institute on Deafness and Other Communication Disorders**

